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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Washington, D.C. 20460

EPA NPDES Compliance Inspection Report

Form Approved
OMB No. 2040-0003
Approval Expires 7-31-85

Section A: National Data System Coding

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Transaction Code		NPDES									yr/mo/day						Inspec. Type	Inspector	Fac Type
N	5	T	X	0	0	0	7	0	4	8	0	0	0	5	2	5	C	S	2

Remarks: STATE PERMIT # 00639-000

67	69	70	71	72	73	74	75	80
Inspection Work Days		Facility Evaluation Rating	BI	A	Reserved			
		4	N	N				

Section B: Facility Data

Name and Location of Facility Inspected *(For industrial users discharging to POTW, also include POTW name and NPDES permit number)*
The Lubrizol Corporation
P.O. Box 158
Deer Park, Texas 77536

Entry Time /Date
5/25/00 9:00 a.m.

Permit Effective Date
10/25/93

Exit Time/Date
5/25/00 4:30 p.m.

Permit Expiration Date
01/15/95

Name(s) of On-Site Representative(s)/Title(s)/Phone and Fax Number(s)
Wesley Mollard, III Environmental Engineer (281)479-2851
James Ganger, Environmental, Health & Safety Manager (281)884-5338
William Carll, Environmental Affairs Manager (281)479-2851
Jay Camp, Chemist, Wastewater Treatment (281)479-2851

Other Facility Data

Name, Address of Responsible Official/Title/Phone and Fax Number
Mr. Larry Norwood, General Manager
Lubrizol Corporation
P.O. Box 158
Deer Park, Texas 77536-0158
(281)479-2851

Contacted
Yes [ ] No [x]

Section C: Areas Evaluated During Inspection

(S = Satisfactory, M = Marginal, U = Unsatisfactory, N = Not Evaluated)

S	Permit	S	Flow Measurement	M	Operations & Maintenance	S	SO/SO
S	Records/Reports	M	Self-Monitoring Program	S	Sludge Handling/Disposal	S	Pollution Prevention
S	Facility Site Review	N/A	Compliance Schedules	S	Pretreatment	N	Multimedia
U	Effluent/Receiving Waters	S	Laboratory	S	Storm Water	N/A	Other:

Section D: Summary of Findings/Comments (Attach additional sheets if necessary)

See the attached State Inspection Report

A Biomonitoring Audit was conducted.

Name(s) and Signature(s) of Inspector(s)	Agency/Office/Telephone/Fax	Date
Barbara S. Sullivan	TNRCC/Region 12 - Houston/(713)767-3670 fax 3691	6/29/00
Signature of Management A Reviewer	Agency/Office/Phone and Fax Numbers	Date
	TNRCC/R-12 Houston (713) 767-3674	7-5-00

EPA Form 3560-3 (Rev. 9-94) Previous editions are obsolete.

9155476

SUMMARY OF INSPECTION FINDINGS

Entity: The Lubrizol Corporation	TNRCC ID: 00639-000 EPA ID: TX0007048	Inspection Date: 5/25/00

OUTSTANDING ALLEGED VIOLATIONS

No.	Requirement(s) Cited	Description of Alleged Violation, Corrective Action Recommendation, and Compliance Documentation	Compliance Due Date
1	Permit No. 00639-000, page 2c, no. 1	Region Documented Effluent Quality: The final effluent at outfall 001 had a Biochemical Oxygen Demand (BOD) of 29 mg/l. The single grab limit for BOD is 20 mg/l. Compliance Documentation: Provide written documentation that the facility is compliance with this parameter.	Immediately

ALLEGED NONCOMPLIANCES NOTED AND RESOLVED

No.	Requirement(s) Cited	Description of Alleged Noncompliance, Corrective Action Taken, and Compliance Documentation
1	Permit No. 00639-000, page 4, no. 3	Self Monitoring Procedures: The time of analysis for pH was not being recorded. The time must be recorded to determine if the sample is being analyzed within the required hold time. On June 15, 2000, documentation was received from Lubrizol indicating that the time of pH analysis is now being recorded. (See attached document)
2	Permit No. 00639-000, page 7, no. 1	Operations and Maintenance: During the plant tour, it was noted that settling was occurring in one corner of the aeration basin and a septic odor was being produced. On June 15, 200, documentation was received that a new mixer has been installed.
3		

Operation & Maintenance
The Lubrizol Corporation
Permit No. 00639
The Process Wastewater Treatment System (PWTS)
And Stormwater Treatment System

The process wastewater treatment system (PWTS) consists of a network of collection sewer lines which originate in various process units and bermed areas that contain potentially contaminating process and pumping equipment. These collection lines flow to one of three wastewater lift stations (L/S), two of which are located in the main 64 acre west plant on the west side of Tidal Road, and are designated as L/S No.1/Main/North and L/S No.2/South. The third L/S is located in the relatively undeveloped 150 acre east plant on the east side of Tidal Road. Due to new VOC regulations for industrial oil/water separator units, the rope skimmers previously located at L/S's No.3 and No.2 have been removed. These two L/S's are now used for water transfer only.

The standard operating procedure (SOP) is for process water to be pumped from L/S No.3 into the line just downstream of L/S No. 2, which then flows into L/S No.1. Most sedimentation and removal of the organic fraction occurs at L/S No. 1, which has been refurbished since the 2/1/95 compliance inspection. The No. 1 L/S consists of 2 "Pit Tanks" for initial solids settling, a new elevated Grit Removal Unit, and 2 expanded and refurbished API Separators. The partially treated process streams leaving the API's are pumped to Equalization Tank E6 at the PWTS located at the south end of the facility. The organic fractions which are removed in the API's are pumped to Tanks W012 and W011 for additional water separation, and the water fraction is drained back into L/S No. 1.

The partially treated process water then arrives at the 1 MG Equalization Tank E6 at the PWTS. E6 previosly had rope skimmers, but they have been removed due to the same regulations which have effected the removal of the rope skimmers at L/S's No. 2 and No. 3. The pH of the usually acidic incoming wastewater stream (pH of 0.5 to 2.0 s.u.) is adjusted with either a 20% lime slurry (Ca(OH)2) or a 45% NaOH solution prior to Tank E6. The pH is further adjusted in the coarse neutralization tank (T3) and in the fine neutralization tank (T4) primarily via the use of a 10% lime solution. The SOP is for water leaving T4 to have a pH of 9.5-10 s.u. To aid in flocculation, polymer is added prior to tank T22. The partially treated influent then flows into two, rectangular, primary clarifiers, designated as T-5A and T-5B, which are operated in parallel. Bacterial nutrients, namely ammonia and phosphoric acid, are added to the clarified waste stream, which then flows to a 4.5 MG earthen berm, aeration basin which provides a reported 4-6 day detention time. This aeration basin is equipped with five mechanical aerators.

Mixed liquor from the aeration basin then flows into two, round, below-grade, secondary clarifiers, which are operated in parallel, and where final polishing occurs. The water which leaves these final clarifiers flows through a 6" Parshall Flume, equipped with an electronic flow recorder and an American Sigma composite sampler, and is discharged into a large, round, covered culvert pipe in Patricks Bayou as Outfall 001. See attached schematics.

The solids which are generated from the PWTS are designated as Class I Non-Hazardous and Class II wastes. These solids are generated from the following treatment units:

Class I Non-Hazardous "Chem-Sludge" :

1. The Zinc removal system in the east plant;
2. The two API Separators at L/S No.1;
3. The two Primary Clarifiers at the PWTS.

Class II "Bio-Sludge" : The two Secondary Clarifiers at the PWTS.

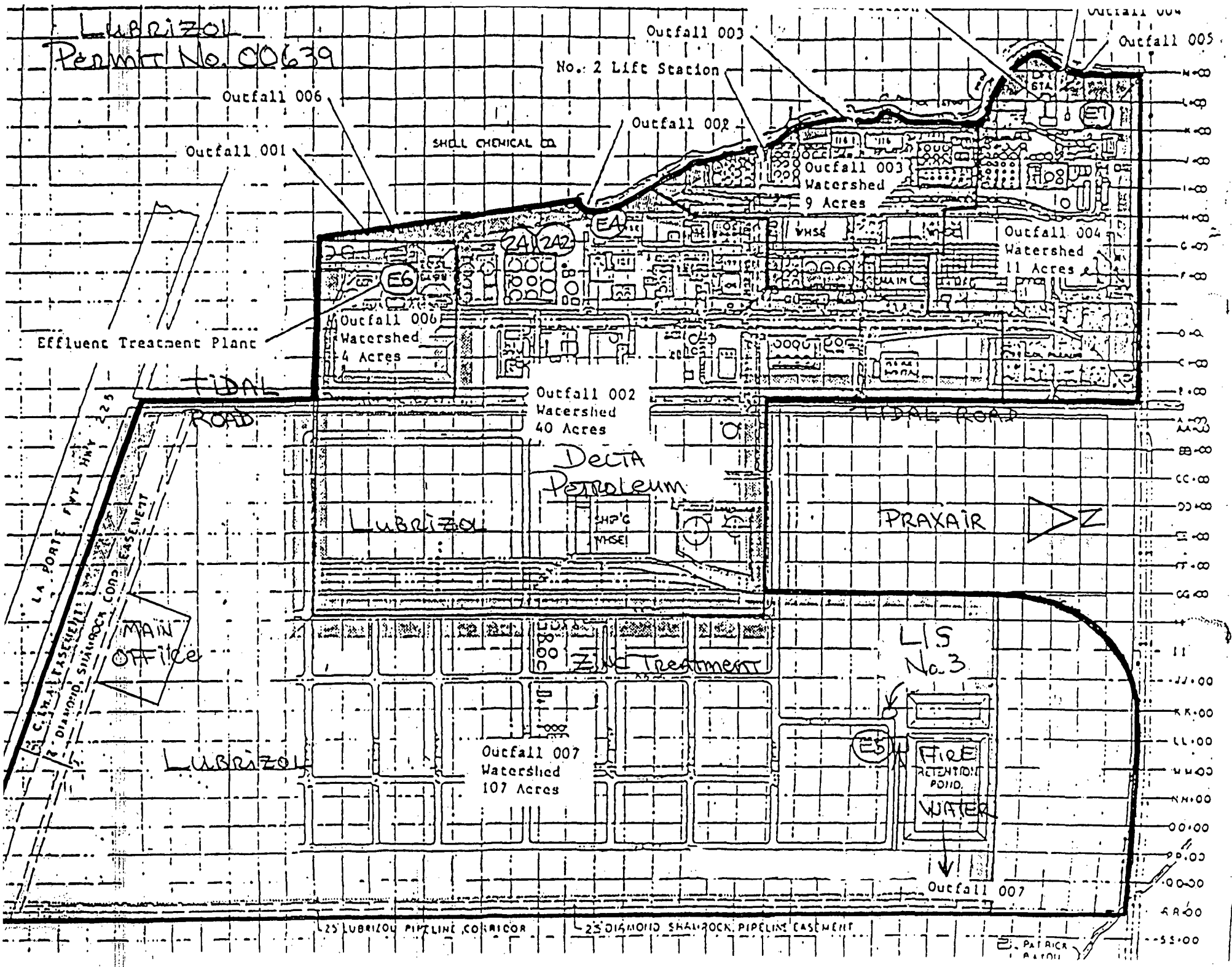
The Class I "Chem-Waste" sludges are pumped to the Chemical Sludge Conditioning Tank T8 for conditioning prior to dewatering, while the Class II solids from the two, secondary, biological, clarifiers is pumped to the Biological Sludge Conditioning Tank T9 for conditioning. The Class I and Class II sludges were previously mixed and then dewatered via a one meter belt press and then taken offsite for proper disposal. Now these two classes of solids are kept segregated and are dewatered separately, using the same single belt press but with flush washings between sludge class changeovers. The Class I "Chem-Sludge" is reportedly pressed Mondays through Fridays, while the Class II "Bio-Sludge" is pressed on Saturdays and Sundays. The Class I sludge is disposed of at the BFI landfill in Anahuac, while the Class II solids are disposed of at the BFI McCarty Road landfill.

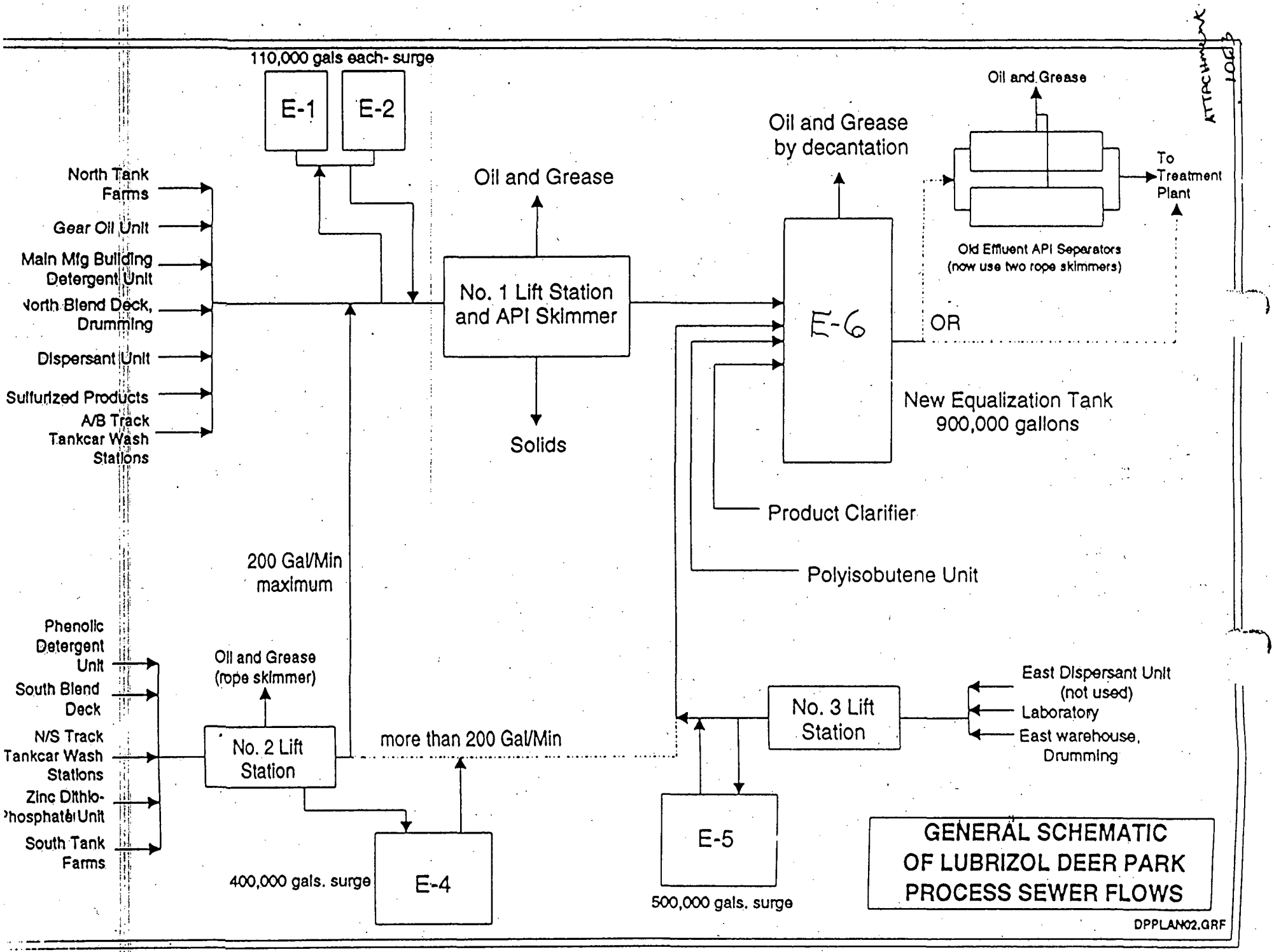
Stormwater can be discharged from the facility via each of the 7 outfalls. Five of these seven outfalls are dedicated to uncontaminated stormwater discharges, namely Outfalls 002, 003, 004, 006 and 007. Potentially contaminated stormwater is captured and treated via the PWTS and discharged via Outfall 001as described above. Outfall 005 is a high flow stormwater and process water by-pass which is reportedly pressed into service only during high stormwater flow conditions, when the PWTS and the "first flush" process/stormwater tank is full. See paragraph 1, Page 3, of this attachment, for additional details concerning Outfall 005.

The SOP for handling stormwater in the west plant is for the "first flush" of stormwater from the 002 and 006 areas to be pumped into 1 MG/each storage tanks D241 and D242. Areas 002 and 006, which are cross-connected, are then discharged via Outfall 002. The stormwater stored in tanks D241 and D242 is sampled, and if it meets the permit parameters, is discharged via Outfall 002. If the water does not meet the noncontaminated stormwater discharge permit parameters, it is later routed through the PWTS for treatment and is eventually discharged via Outfall 001. The "first flush" from the 003 and 004 areas, which are also cross-connected, is pumped to storage tank E7, and the additional flows are usually discharged via Outfall 004. The stormwater in Tank E7 is later sampled, like Tanks D241 and D242, and, if the stormwater meets the permit parameters, is discharged via Outfall 004. If the water stored in Tank E7 fails to meet the stormwater discharge parameters, it can also be routed to the PWTS for treatment and eventual discharge via Outfall 001. During high wet weather flows, Outfall 003 is sometimes pressed into service as well.

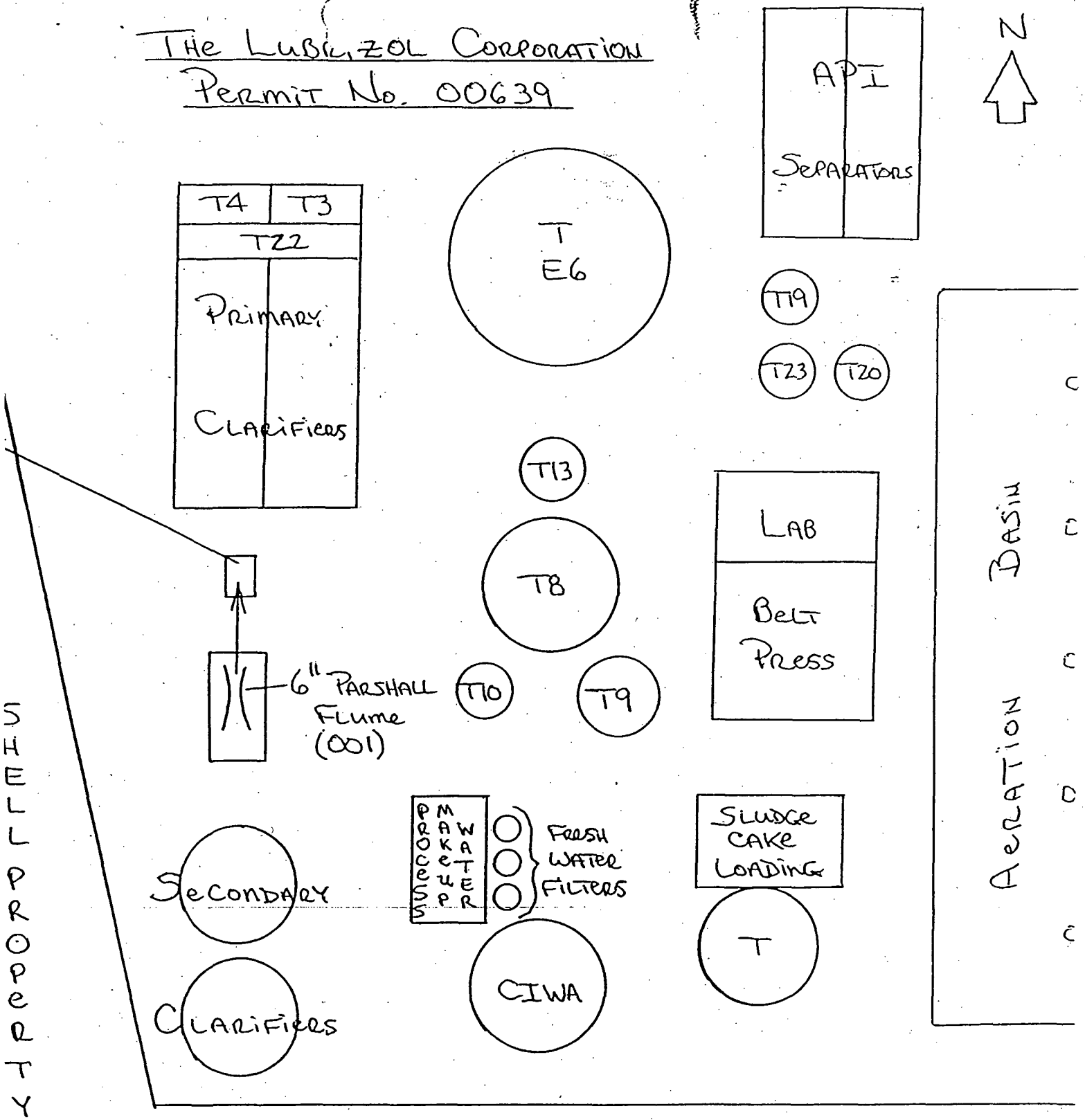
During stormwater events, the process water and potentially contaminated stormwater from the process units and the bermed process areas that contain potentially contaminating process and pumping equipment, is normally pumped to the PWTS for treatment. When the PWTS reaches its hydraulic capacity, the process/stormwater can be diverted to process water holding tank E4. If the rain continues, during extremely high wet weather flows, when the PWTS and Tank E4 become full, then Outfall 005 can be pressed into service for discharge of non-treated process wastewater. During the 35 month review period (1/95 through 11/97), Outfall 005 had not discharged a single time. Two additional API Separators exist at the PWTS, but, due to the new VOC regulations for industrial oil/water separator units, the rope skimmers which were previously located at these two units have been removed, and, for dry weather SOP, the APIs have been taken offline. During high wet weather flows, however, process influent pumped to the Equalization Tank E6 at the PWTS can be routed through these two PWTS APIs for additional organic separation.

Stormwater in the east plant first drains to the Firewater Pond for settling and storage. East plant stormwater can then be discharged via Outfall 007 to the east fork of Patricks Bayou.


Lubrizol
Permit No. 00639
Outfall 003
No. 2 Lift Station
Outfall 005
Outfall 006
Outfall 002
Outfall 001
SHELL CHEMICAL CO.
Outfall 003
Watershed
9 Acres
Outfall 004
Watershed
11 Acres
Effluent Treatment Plant
Outfall 006
Watershed
4 Acres
TIDAL ROAD
Outfall 002
Watershed
40 Acres
Delta Petroleum
Lubrizol
PRAXAIR
MAIN OFFICE
Zinc Treatment
LIS No. 3
Outfall 007
Watershed
107 Acres
FIRE RETENTION POND
WATER
Outfall 007
25 LUBRIZOL PIPELINE CORRIDOR
25 DIAMOND SHAMROCK PIPELINE EASEMENT
LA PORTE HWY


110,000 gals each- surge
E-1
E-2
North Tank Farms
Gear Oil Unit
Main Mfg Building Detergent Unit
North Blend Deck, Drumming
Dispersant Unit
Sulfurized Products
A/B Track Tankcar Wash Stations
Oil and Grease
No. 1 Lift Station and API Skimmer
Solids
Oil and Grease by decantation
E-6
New Equalization Tank 900,000 gallons
Oil and Grease
To Treatment Plant
Old Effluent API Separators (now use two rope skimmers)
OR
Product Clarifier
Polyisobutene Unit
200 Gal/Min maximum
Phenolic Detergent Unit
South Blend Deck
N/S Track Tankcar Wash Stations
Zinc Dithio-phosphate Unit
South Tank Farms
Oil and Grease (rope skimmer)
No. 2 Lift Station
more than 200 Gal/Min
400,000 gals. surge
E-4
E-5
500,000 gals. surge
No. 3 Lift Station
East Dispersant Unit (not used)
Laboratory
East warehouse, Drumming
GENERAL SCHEMATIC OF LUBRIZOL DEER PARK PROCESS SEWER FLOWS
DPPLAN02.GRF

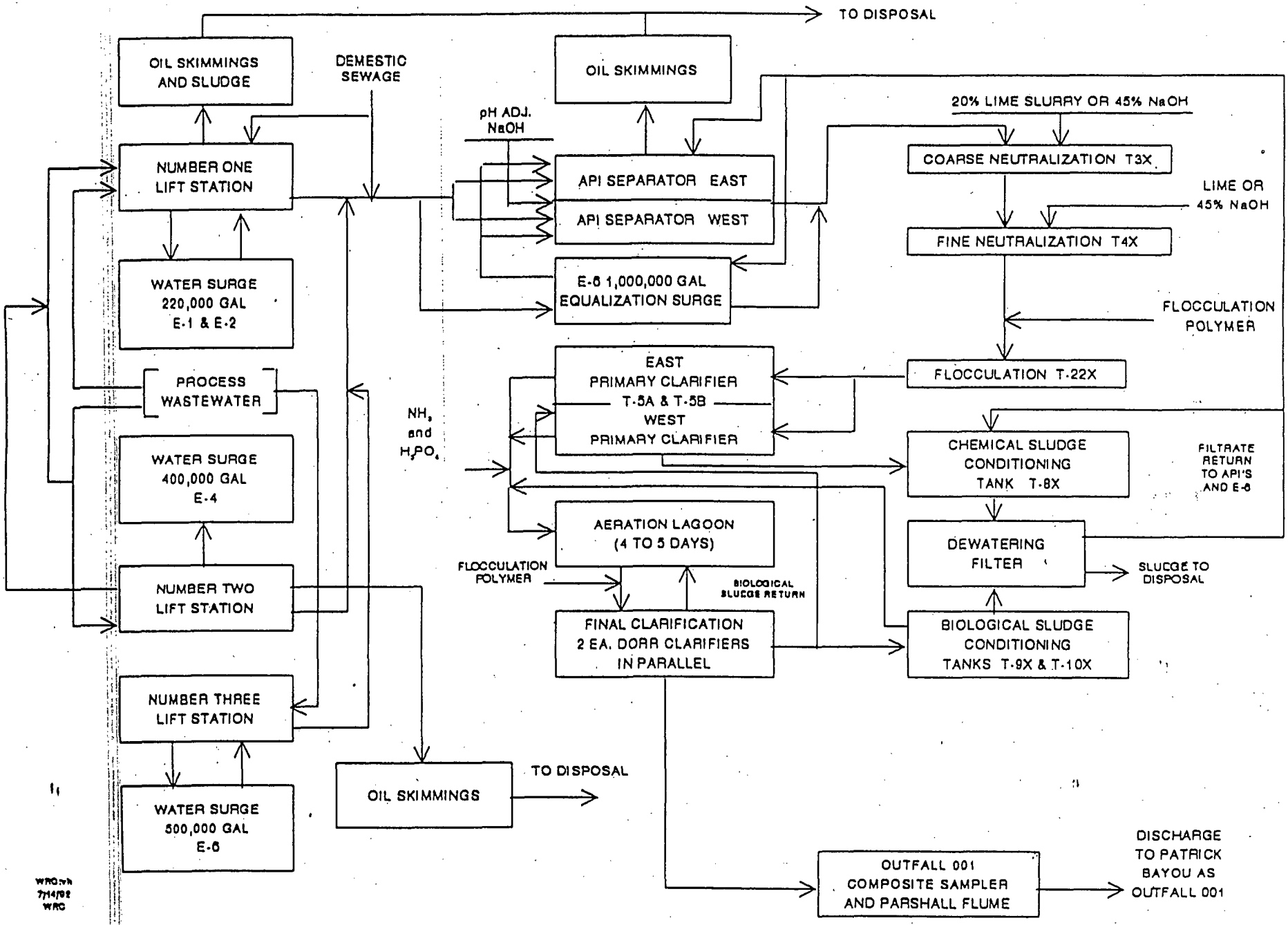
The Lubrizol Corporation
Permit No. 00639



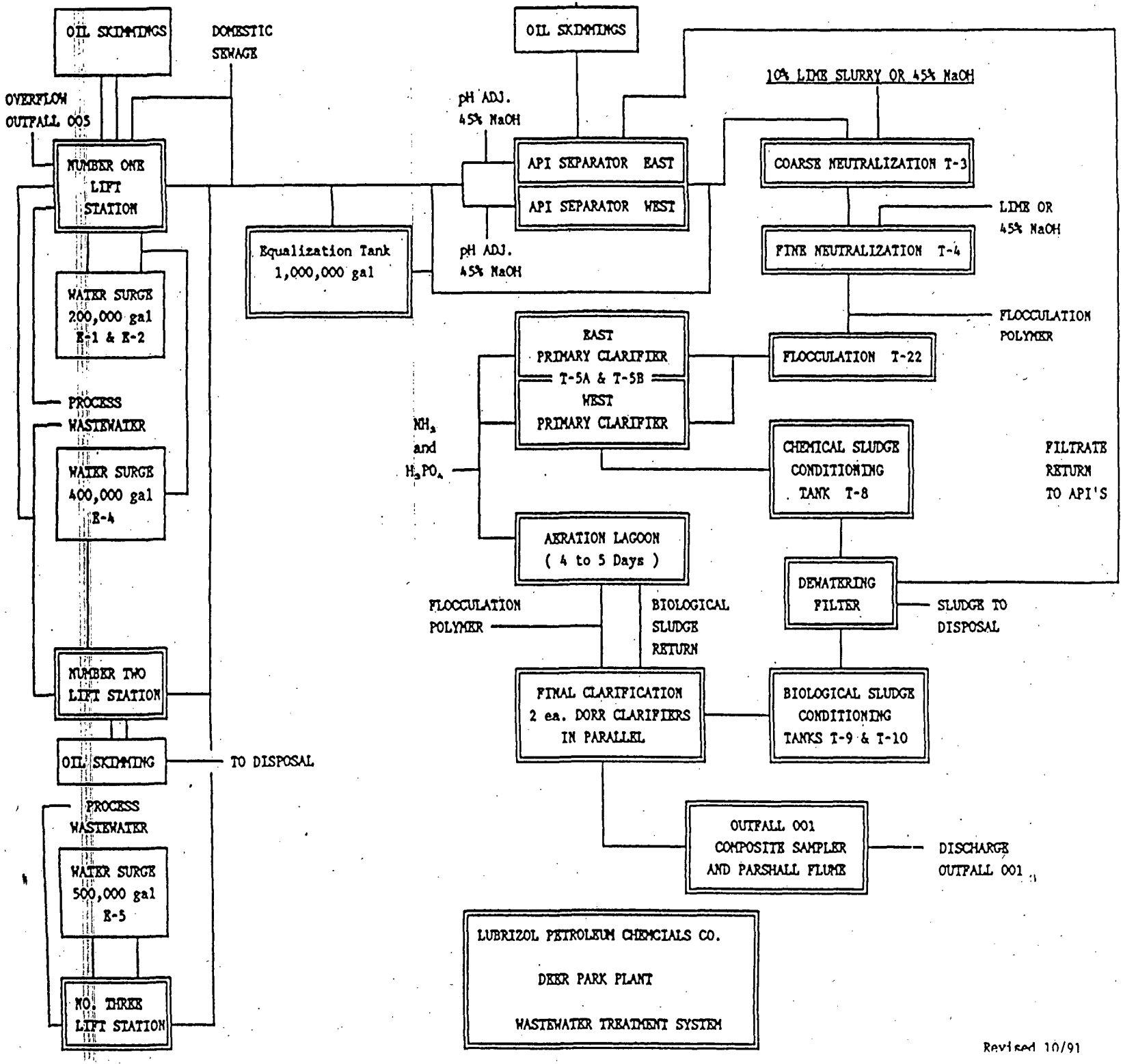
SHELL PROPERTY

HIGHWAY 225

THE LUBRIZOL CORP ATION - DEER PARK PLANT
WASTE WATER TREATMENT SYSTEM



WRC:vh
7/14/92
WRC



Revised 10/91

1132

TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

Chain of Custody Record

007152

Location: Lubrizol Corp (Do not fill in this shaded area if the facility Information must be confidential)

Permit #: 00639-000

Region:	Organization #:	PCA Code:	Program:	Sampler telephone number:
12	4212	93825	Water	(713) 767-3670

E-Mail ID:	Sampler: (signature)	Sampler: (please print clearly)
BSULLIVA		

Lab ID Number	Sample ID	Date	Time	# of Bottles	Grab/ Comp.	Matrix L,S,M,O,T	CL2	pH	Cond.	Analyses Requested	REMARKS
0003286 ~~0003286~~	001 -01	5/25/00	~~1200~~ 0855	3	G	L	7.1	–	–	BOD5, TSS, metals, O&G	
0003287	002 -02	5/25/00	0400	5	G	L	–	–	–	TOC, COD, O&G, pH	
	-03										
	-04										
	-05										
	-06										
	-07										
	-08										
	-09										
	-10										

Relinquished by:	Date	Time	Received by:
BES	5/25/00	4:30 pm	
Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time 4:30	Received by: Nicca Brown

Shipper name: Self

Shipper Number: Hand delivered

For Laboratory Use: Add Cl to ID#02

Received on ice:	(Y)	N	4 deg. C
Preservatives:	(Y)	N	
COC Seal:	Y	(N)	
Seals Intact:	Y	N	N/A

TNRCC

TNRCC Laboratory

Report of Analysis

Jun 22, 2000 4:00PM

TNRCC Sample #: 0003286	Group #: 20001132	Chain of Custody # 007152-01	Region: 12
Matrix: LIQUID	Depth:	Station ID:	
Collected: 5/25/00 12:00	Received: 05/25/00	Collected by: BSULLIVA	
Program: WATER			
Collection Site: Lubrizol Corp--Grab--001			

Constituent Name	Result	Unit	Prepared	Analyzed	Method
BOD (5 day)	29	mg/L		05/26/00 8:05	405.1
Hexane Extractable Material	7	mg/L		06/15/00 11:00	1664
Total Suspended Solids	43	mg/L		05/26/00 13:00	160.2
Volatile Suspended Solids	22	mg/L		05/26/00 13:00	160.4
pH	7.23	su		05/26/00 8:05	150.1
Aluminum	664	ug/L	5/26/00 4:00	06/06/00 1:19	200.7(T)
Arsenic	<67	ug/L	5/26/00 4:00	06/06/00 1:19	200.7(T)
Barium	968	ug/L	5/26/00 4:00	06/06/00 1:19	200.7(T)
Cadmium	<11	ug/L	5/26/00 4:00	06/06/00 1:19	200.7(T)
Chromium	<9	ug/L	5/26/00 4:00	06/06/00 1:19	200.7(T)
Copper	<11	ug/L	5/26/00 4:00	06/06/00 1:19	200.7(T)
Iron	138	ug/L	5/26/00 4:00	06/06/00 1:19	200.7(T)
Lead	<67	ug/L	5/26/00 4:00	06/06/00 1:19	200.7(T)
Manganese	45	ug/L	5/26/00 4:00	06/06/00 1:19	200.7(T)
Mercury	0.015	ug/L		06/05/00 19:00	245.7(T)
Molybdenum	43	ug/L	5/26/00 4:00	06/06/00 1:19	200.7(T)
Nickel	31	ug/L	5/26/00 4:00	06/06/00 1:19	200.7(T)
Selenium	<67	ug/L	5/26/00 4:00	06/06/00 1:19	200.7(T)
Silver	<7	ug/L	5/26/00 4:00	06/06/00 1:19	200.7(T)
Vanadium	<4	ug/L	5/26/00 4:00	06/06/00 1:19	200.7(T)
Zinc	204	ug/L	5/26/00 4:00	06/06/00 1:19	200.7(T)

End of Data for TNRCC Sample #: 0003286

Analysis Comments:

Written By: GBLANK Date Written: 06/09/2000 11:06 Method: 200.7(Total)

Note Text: Sample required dilution, resulting in higher reporting limits.

Laboratory Approval: _____ **22-Jun-00**

TNRCC

TNRCC Laboratory

Report of Analysis

Jun 22, 2000 4:00PM

TNRCC Sample #: 0003287	**Group #:** 20001132	**Chain of Custody #** 007152-02	**Region:** 12
Matrix: LIQUID	**Depth:**	**Station ID:**	
Collected: 5/25/00 14:00	**Received:** 05/25/00	**Collected by:** BSULLIVA	
Program: WATER			
Collection Site: Lubrizol Corp--Grab--007			

Constituent Name	Result	Unit	Prepared	Analyzed	Method
Chemical Oxygen Demand	7	mg/L		06/05/00 8:30	Hach
Chloride	11	mg/L		05/26/00 13:00	300.0
Hexane Extractable Material	<5	mg/L		06/15/00 11:00	1664
Total Organic Carbon	3	mg/L		06/01/00 13:03	415.2
pH	7.79	su		05/26/00 8:05	150.1

End of Data for TNRCC Sample #: 0003287

Laboratory Approval: _____ **22-Jun-00**